SAFETY DATA SHEET
Argon, Part Number G8000-70001

Section 1. Identification

Product identifier : Argon, Part Number G8000-70001
Part No. : G8000-70001
Chemical identity : Argon

Relevant identified uses of the substance or mixture and uses advised against
Analytical chemistry.
950 cc (Steel. Container)

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: (61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARNING</td>
<td>H280 - Contains gas under pressure; may explode if heated.</td>
</tr>
</tbody>
</table>

Precautionary statements

<table>
<thead>
<tr>
<th>Prevention</th>
<th>Response</th>
<th>Storage</th>
<th>Disposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>P410 - Protect from sunlight.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>P403 - Store in a well-ventilated place.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other hazards which do not result in classification

Acts as a simple asphyxiant. At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

Section 3. Composition and ingredient information

Substance/mixture : Substance

CAS number/other identifiers

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>(v/v)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argon</td>
<td>100</td>
<td>7440-37-1</td>
</tr>
</tbody>
</table>

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Section 3. Composition and ingredient information

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

**Eye contact**

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**

As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

**Potential acute health effects**

**Eye contact**

Contact with rapidly expanding gas may cause burns or frostbite.

**Inhalation**

At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

**Skin contact**

Contact with rapidly expanding gas may cause burns or frostbite.

**Ingestion**

As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

**Eye contact**

No specific data.

**Inhalation**

No specific data.

**Skin contact**

No specific data.

**Ingestion**

No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician**

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**

No specific treatment.

**Protection of first-aiders**

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)
Section 5. Firefighting measures

**Extinguishing media**
- **Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.
- **Unsuitable extinguishing media**: None known.

**Specific hazards arising from the chemical**
- **Hazardous thermal decomposition products**: Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

**Special protective actions for fire-fighters**: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Hazchem code**: 2T

Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
- **For non-emergency personnel**: 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 appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- **For emergency responders**: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions**: 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**
- **Methods for cleaning up**: Immediately contact emergency personnel. Stop leak if without risk.

Section 7. Handling and storage

**Precautions for safe handling**
- **Protective measures**: Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container.
- **Advice on general occupational hygiene**: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities**: Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use.

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Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argon</td>
<td>Oxygen Depletion [Asphyxiant]</td>
</tr>
</tbody>
</table>

Appropriate engineering controls: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: The gas can cause asphyxiation without warning by replacing the oxygen in the air. Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. If operating conditions cause high gas concentrations to be produced or any recommended or statutory exposure limit is exceeded, use an air-fed respirator or self-contained breathing apparatus. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state: Gas. [Inert material.]
Colour: Colourless.
Odour: Odourless.
Odour threshold: Not available.
Section 9. Physical and chemical properties

- **pH**: Not available.
- **Melting point**: -189.2°C (-308.6°F)
- **Boiling point**: -185°C (-301°F)
- **Flash point**: Not available.
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not available.
- **Lower and upper explosive (flammable) limits**: Not available.
- **Vapour pressure**: Not available.
- **Vapour density**: 1.38
- **Relative density**: 1.38
- **Density**: 1.38 g/cm³
- **Solubility in water**: 0.055 g/l
- **Partition coefficient: n-octanol/water**: 0.74
- **Auto-ignition temperature**: Not available.
- **Decomposition temperature**: Not available.
- **Viscosity**: Not available.

**Section 10. Stability and reactivity**

- **Reactivity**: No specific test data related to reactivity available for this product or its ingredients.
- **Chemical stability**: The product is stable.
- **Possibility of hazardous reactions**: Under normal conditions of storage and use, hazardous reactions will not occur.
- **Conditions to avoid**: Do not allow gas to accumulate in low or confined areas.
- **Incompatible materials**: May react or be incompatible with oxidising materials.
- **Hazardous decomposition products**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Section 11. Toxicological information**

- **Information on toxicological effects**
  - **Acute toxicity**: Not available.
  - **Irritation/Corrosion**: Not available.
  - **Sensitisation**: Not available.
  - **Mutagenicity**: Not available.
  - **Carcinogenicity**: Not available.
  - **Reproductive toxicity**: Not available.
Section 11. Toxicological information

Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Information on likely routes of exposure

Inhalation: At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

Ingestion:

Skin contact: Contact with rapidly expanding gas may cause burns or frostbite.

Eye contact: No known significant effects or critical hazards.

General:

Carcinogenicity:

Mutagenicity:

Teratogenicity:

Developmental effects:

Fertility effects:

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data.
Inhalation: No specific data.
Skin contact: No specific data.
Ingestion: No specific data.

Potential acute health effects

Eye contact: No specific data.
Inhalation: No specific data.
Skin contact: No specific data.
Ingestion: No specific data.

Potential chronic health effects

General: No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates
Not available.

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Section 11. Toxicological information

Section 12. Ecological information

**Toxicity**
Not available.

**Persistence and degradability**
Not available.

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argon</td>
<td>0.74</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

**Mobility in soil**

Soil/water partition coefficient (K_{oc}) : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

Section 13. Disposal considerations

**Disposal methods** :
The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty pressure vessels should be returned to the supplier. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

<table>
<thead>
<tr>
<th></th>
<th>ADG</th>
<th>IMDG</th>
<th>IATA</th>
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<tbody>
<tr>
<td><strong>UN number</strong></td>
<td>UN1006</td>
<td>UN1006</td>
<td>UN1006</td>
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<tr>
<td><strong>UN proper shipping name</strong></td>
<td>ARGON, COMPRESSED</td>
<td>ARGON, COMPRESSED</td>
<td>Argon, compressed</td>
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<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td>2.2</td>
<td>2.2</td>
<td>2.2</td>
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<tr>
<td><strong>Packing group</strong></td>
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<td>-</td>
<td>-</td>
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<tr>
<td><strong>Environmental hazards</strong></td>
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<td>No.</td>
<td>No.</td>
</tr>
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</table>
## Section 14. Transport information

<table>
<thead>
<tr>
<th>Additional information</th>
<th>Hazchem code</th>
<th>Emergency schedules (EmS)</th>
<th>Passenger and Cargo Aircraft</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2T</td>
<td>F-C, S-V</td>
<td>Quantity limitation: 75 kg</td>
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<tr>
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<td>Packaging instructions: 200</td>
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<td></td>
<td></td>
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<td>Cargo Aircraft Only</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Quantity limitation: 150 kg</td>
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<td>Packaging instructions: 200</td>
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<td>Limited Quantities -</td>
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<td>Limited Quantities -</td>
</tr>
<tr>
<td>Passenger Aircraft</td>
<td></td>
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<td>Passenger Aircraft</td>
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<tr>
<td>Quantity limitation:</td>
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<td></td>
<td>Quantity limitation:</td>
</tr>
<tr>
<td>Forbidden</td>
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<td></td>
<td>Forbidden</td>
</tr>
<tr>
<td>Packaging instructions:</td>
<td></td>
<td></td>
<td>Forbidden</td>
</tr>
</tbody>
</table>

### Special provisions

A69

### Special precautions for user

Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of Marpol and the IBC Code: Not available.

## Section 15. Regulatory information

### Standard Uniform Schedule of Medicine and Poisons

Not regulated.

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### Australia inventory (AICS)

This material is listed or exempted.

### International regulations

- **Chemical Weapon Convention List Schedules I, II & III Chemicals**
  
  Not listed.

- **Montreal Protocol (Annexes A, B, C, E)**
  
  Not listed.

- **Stockholm Convention on Persistent Organic Pollutants**
  
  Not listed.

- **Rotterdam Convention on Prior Inform Consent (PIC)**
  
  Not listed.

- **UNECE Aarhus Protocol on POPs and Heavy Metals**
  
  Not listed.

### National lists

#### National inventory

- **Canada**: This material is listed or exempted.
- **China**: This material is listed or exempted.
- **Europe**: This material is listed or exempted.
- **Japan**: Japan inventory (ENCS): This material is listed or exempted.
  
  Japan inventory (ISHL): This material is listed or exempted.
- **Malaysia**: This material is listed or exempted.
- **New Zealand**: This material is listed or exempted.

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Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>Taiwan</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>Turkey</td>
<td>Not determined.</td>
</tr>
<tr>
<td>United States</td>
<td>This material is listed or exempted.</td>
</tr>
</tbody>
</table>

Section 16. Any other relevant information

**Key to abbreviations**
- ADG = Australian Dangerous Goods
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- NOHSC = National Occupational Health and Safety Commission
- SUSMP = Standard Uniform Schedule of Medicine and Poisons
- UN = United Nations

**Procedure used to derive the classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press. Gas Comp. Gas, H280</td>
<td>Expert judgment</td>
</tr>
</tbody>
</table>

**References**

- Not available.

**Notice to reader**

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