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

1.1 Product identifier

Product name: Arsenic AA Standard: 1000 µg/mL As in 5% HNO3 [100ml bottle]

Part number: 5190-8260

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

Application of the substance / the mixture Reference material for laboratory use only

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

Further information obtainable from: e-mail: pdl-msds_author@agilent.com

1.4 Emergency telephone number:
CHEMTREC®: +(61) - 290372994

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Corrosion

Eye Dam. 1 H318 Causes serious eye damage.

Skin Irrit. 2 H315 Causes skin irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R38-41: Irritating to skin. Risk of serious damage to eyes.

Information concerning particular hazards for human and environment:
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS05

Signal word Danger

(Contd. on page 2)
Product name: Arsenic AA Standard: 1000 µg/mL As in 5% HNO3 [100ml bottle]

- **Hazard statements**
  - H315 Causes skin irritation.
  - H318 Causes serious eye damage.

- **Precautionary statements**
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P310 Immediately call a POISON CENTER/doctor.
  - P321 Specific treatment (see on this label).
  - P362 Take off contaminated clothing and wash before reuse.
  - P332+P313 If skin irritation occurs: Get medical advice/attention.

- **Information concerning particular hazards for human and environment:**

- **Safety phrases:**
  - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  - 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
  - 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
  - 60 This material and its container must be disposed of as hazardous waste.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
  - PBT: Not applicable.
  - vPvB: Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
  - **Description:**
    Aqueous solution.
    Mixture: consisting of the following components.

- **Dangerous components:**
  - **CAS:** 7697-37-2
  - **EINECS:** 231-714-2
  - **RTECS:** QU5775000
  - **Nitric acid**
    - **C R35;** Ox. Liq. 3; H272; Skin Corr. 1A, H314
    - **O R8;** < 5%

  - **CAS:** 7440-38-2
  - **EINECS:** 231-148-6
  - **RTECS:** CG 0525000
  - **Arsenic**
    - **T R23/25;** N R50/53
    - **Acute Tox. 3, H301; Acute Tox. 3, H331
    - **< 0.1%**

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
  - **After inhalation:** In case of unconsciousness place patient in recovery position for transport.
  - **After skin contact:**
    - Immediately wash with water and soap and rinse thoroughly.
    - If skin irritation continues, consult a doctor.
  - **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
  - **After swallowing:** Rinse mouth. Do not induce vomiting.

- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed**
  - No further relevant information available.
SECTION 5: Firefighting measures

- 5.1 Extinguishing media
  Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture
  Formation of toxic gases is possible during heating or in case of fire.
- 5.3 Advice for firefighters
  Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  Wear protective clothing.
- 6.2 Environmental precautions:
  Dilute with plenty of water.
  Do not allow to enter sewers/surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
  Ensure adequate ventilation.
  Absorb liquid components with liquid-binding material.
  DO NOT USE SAWDUST.
- 6.4 Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
  Ensure good ventilation/extraction at the workplace.
  Store in cool, dry place in tightly closed receptacles.
  Prevent formation of aerosols.
- Information about fire - and explosion protection: No special measures required.
- 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
  Requirements to be met by storerooms and receptacles:
  Store in a cool location.
  Please refer to the manufacturer's certificate for specific storage and transport temperature conditions.
  Store only in the original receptacle.
  Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
  Information about storage in one common storage facility: Store away from foodstuffs.
  Further information about storage conditions: None.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.


## 8.1 Control parameters

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7697-37-2 Nitric acid</strong></td>
</tr>
</tbody>
</table>
| NES | Short-term value: 10 mg/m³, 4 ppm  
| Long-term value: 5.2 mg/m³, 2 ppm |  
| **7440-38-2 Arsenic** |  
| NES | Long-term value: 0.05 mg/m³  
| Note (g); as As |  

### Additional information: Lists used were valid at the time of SDS preparation.

#### 8.2 Exposure controls

- **Personal protective equipment:**
  - **General protective and hygienic measures:**
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the skin.
    - Avoid contact with the eyes and skin.
  - **Respiratory protection:**
    - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  - **Protection of hands:**
    - Chemical-resistant, impervious gloves with an approved standards should be worn at all times.
    - The selection of the glove material is based on the penetration times, rates of diffusion and its degradation.

![Protective gloves](image)

**Material of gloves**
- PVC gloves
- Neoprene gloves

- **Penetration time of glove material**
  - The protection time of the gloves can not be accurately estimated for mixtures consisting of several substances.
  - Refer to and observe manufacturers break through times of the protective gloves.

- **Eye protection:**
  - Tightly sealed goggles

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SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - Form: Liquid
    - Colour: Colourless
    - Odour: Odourless
  - **Odour threshold:** Not determined

(Contd. on page 5)
### SECTION 10: Stability and reactivity

- **10.1 Reactivity** Stable under normal conditions.
- **10.2 Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
  Formation of toxic gases is possible during heating or in case of fire.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Heat.
- **10.5 Incompatible materials:** Strong oxidizing agents.
- **10.6 Hazardous decomposition products:**
  Formation of toxic gases is possible during heating or in case of fire.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values relevant for classification:**
  7697-37-2 Nitric acid
  - Oral LD0 430 mg/kg (Human)
Product name: Arsenic AA Standard: 1000 µg/mL As in 5% HNO3 [100ml bottle]

Inhalative LC50/4 h 130 mg/l (rat)

- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Strong irritant with the danger of severe eye injury.
  - Sensitisation: No sensitising effects known.
- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Irritant

SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity:
  7697-37-2 Nitric acid
  LC50/48 180 mg/l (crustacean)

- 12.2 Persistence and degradability
  No further relevant information available.
- 12.3 Bioaccumulative potential
  No further relevant information available.
- 12.4 Mobility in soil
  No further relevant information available.
- Additional ecological information:
  - General notes:
    Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
    Do not allow undiluted product to reach ground water, water course or sewage system.
  - 12.5 Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - 12.6 Other adverse effects
    No further relevant information available.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
  - Recommendation
    Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
  - European waste catalogue
    Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
  - Uncleaned packaging:
    - Recommendation: Dispose of in accordance with national regulations.
    - Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- 14.1 UN-Number
  - ADG, IMDG, IATA: UN2031
  - ADG: 2031 NITRIC ACID solution
  - IMDG, IATA: NITRIC ACID solution

(Contd. on page 7)


Product name: Arsenic AA Standard: 1000 µg/mL As in 5% HNO3 [100ml bottle]

- 14.3 Transport hazard class(es)
  - ADG, IMDG, IATA

- Class 8 Corrosive substances.
- Label 8

- 14.4 Packing group
  - ADG, IMDG, IATA II

- 14.5 Environmental hazards:
  - Marine pollutant: No

- 14.6 Special precautions for user
  - Danger code (Kemler): Warning: Corrosive substances.
  - EMS Number: F-A-S-Q
  - Segregation groups: Acids

- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

- Transport/Additional information:

  - ADG
  - Limited quantities (LQ) 1L
  - Transport category 2
  - Tunnel restriction code E

  - UN "Model Regulation": UN2031, NITRIC ACID solution, 8, II

SECTION 15: Regulatory information

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

  - Philippines Inventory of Chemicals and Chemical Substances
    All ingredients are listed.

  - Australian Inventory of Chemical Substances
    All ingredients are listed.

  - Standard for the Uniform Scheduling of Medicines and Poisons
    7697-37-2 Nitric acid S5, S6
    7440-38-2 Arsenic S4, S6, S7

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Relevant phrases
  H272 May intensify fire; oxidiser.
  H301 Toxic if swallowed.
  H314 Causes severe skin burns and eye damage.
**Product name:** Arsenic AA Standard: 1000 µg/mL As in 5% HNO3 [100ml bottle]

(Contd. from page 7)

<table>
<thead>
<tr>
<th>H331</th>
<th>Toxic if inhaled.</th>
</tr>
</thead>
<tbody>
<tr>
<td>R23/25</td>
<td>Toxic by inhalation and if swallowed.</td>
</tr>
<tr>
<td>R35</td>
<td>Causes severe burns.</td>
</tr>
<tr>
<td>R50/53</td>
<td>Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</td>
</tr>
<tr>
<td>R8</td>
<td>Contact with combustible material may cause fire.</td>
</tr>
</tbody>
</table>

**Abbreviations and acronyms:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- Ox. Liq. 3: Oxidising Liquids, Hazard Category 3
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

**Sources**