1 Identification

- Product identifier
  - Product Name: Multi-Element Calibration Standard-3, Part Number 8500-6948
  - Part Number: 8500-6948
  - Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.

- Application of the substance / the mixture
  - Reagents and Standards for Analytical Chemistry Laboratory Use
  - A 100mL Solution

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Agilent Technologies Australia Pty Ltd
    679 Springvale Road
    Mugrave
    Victoria 3170, Australia

- Further information obtainable from: product safety department
  - Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  - Skin Corr. 1 H314 Causes severe skin burns and eye damage.
  - Eye Dam. 1 H318 Causes serious eye damage.
  - STOT SE 3 H335 May cause respiratory irritation.

- Label elements
  - GHS label elements: The product is classified and labelled according to the Globally Harmonised System (GHS).

- Hazard pictograms
  - GHS05
  - GHS07

- Signal word: Danger

- Hazard-determining components of labelling:
  - hydrochloric acid
  - nitric acid

- Hazard statements
  - H314 Causes severe skin burns and eye damage.
  - H335 May cause respiratory irritation.

- Precautionary statements
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.
  - Read label before use.
  - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Immediately call a POISON CENTER/doctor.
  - Specific treatment (see on this label).
3 Composition and Information on Ingredients

- **Chemical characterisation:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Hazard Symbols</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrochloric acid</td>
<td>Skin Corr. 1, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; STOT SE 3, H335</td>
<td>10.0%</td>
</tr>
<tr>
<td>nitric acid</td>
<td>Ox. Liq. 2, H272; Skin Corr. 1, H314</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

**CHEMICAL IDENTIFICATION OF THE SUBSTANCE/PREPARATION**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Hazard Symbols</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>tellurium</td>
<td></td>
<td>0.001%</td>
</tr>
<tr>
<td>Iridium from Iridium(III) chloride hydrate</td>
<td>Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335</td>
<td>0.001%</td>
</tr>
<tr>
<td>palladium</td>
<td>Self-heat. 2, H252; Ox. Sol. 2, H272</td>
<td>0.001%</td>
</tr>
<tr>
<td>platinum</td>
<td>Ox. Sol. 2, H272</td>
<td>0.001%</td>
</tr>
<tr>
<td>rhodium</td>
<td></td>
<td>0.001%</td>
</tr>
<tr>
<td>Ruthenium from Ruthenium (III) chloride trihydrate</td>
<td>Skin Corr. 1B, H314; Eye Dam. 1, H318</td>
<td>0.001%</td>
</tr>
<tr>
<td>tin</td>
<td></td>
<td>0.001%</td>
</tr>
<tr>
<td>antimony</td>
<td></td>
<td>0.001%</td>
</tr>
<tr>
<td>Hafnium from Hafnium(VI) oxychloride hydrate</td>
<td>Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H332</td>
<td>0.001%</td>
</tr>
<tr>
<td>water, distilled, conductivity or of similar purity</td>
<td></td>
<td>88.99%</td>
</tr>
</tbody>
</table>

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

4 First Aid Measures

- **Description of first aid measures**
  - **General information:** Immediately remove any clothing soiled by the product.
  - **After inhalation:** Supply fresh air; consult doctor in case of complaints.
  - **After skin contact:** Immediately rinse with water.
  - **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
  - **After swallowing:** Do not give anything to eat or drink; Do not induce vomiting
  - **Information for doctor:** No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
  - **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
  - **Special hazards arising from the substance or mixture** No further relevant information available.
6 Accidental Release Measures

- **Advice for firefighters:**
  - No special measures required.

- **Protective equipment:**
  - No special measures required.

- **Methods and material for containment and cleaning up:**
  - Dilute with plenty of water.
  - Do not allow to enter sewers/surface or ground water.
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Use neutralising agent.
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.

- **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.

7 Handling and Storage

- **Handling:**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.

- **Information about fire - and explosion protection:**
  - No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**
  - No special requirements.
  - Not required.
  - Keep container tightly sealed.

- **Specific end use(s)**
  - No further relevant information available.

8 Exposure controls and personal protection

- **Ingredients with limit values that require monitoring at the workplace:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Limit Value (objects)</th>
<th>Limit Value (atmosphere)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7647-01-0 hydrochloric acid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NES Peak limitation: 7.5 mg/m³, 5 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WES Peak limitation: 7.5 mg/m³, 5 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7697-37-2 nitric acid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NES Short-term value: 10 mg/m³, 4 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term value: 5.2 mg/m³, 2 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WES Short-term value: 10 mg/m³, 4 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term value: 5.2 mg/m³, 2 ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Additional information:** The lists valid during the making were used as basis.

- **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 eyes.
    - Avoid contact with the eyes and skin.
9 Physical and Chemical Properties

- Information on basic physical and chemical properties
  - General Information
  - Appearance:
    - Form: Liquid
    - Colour: Orange
    - Odour: Odourless
    - Odour threshold: Not applicable.
  - pH-value: <1

- Change in condition
  - Melting point/freezing point: 0°C (32°F)
  - Initial boiling point and boiling range: 100°C (212°F)

- Flash point: Not applicable.

- Flammability (solid, gas): Not applicable.

- Decomposition temperature: Not applicable.

- Auto-ignition temperature: Product is not self-igniting.

- Explosive properties: Product does not present an explosion hazard.

- Explosion limits:
  - Lower: Not applicable.
  - Upper: Not applicable.

- Vapour pressure at 20 °C: 23 hPa

- Density: 1.0 g/mL @ 20°C
- Relative density: Not applicable.
- Vapour density: Not applicable.
- Evaporation rate: Not applicable.

- Solubility in / Miscibility with water: Fully miscible.

- Partition coefficient: n-octanol/water: Not applicable.
10 Stability and Reactivity

- Reactivity
  No further relevant information available.
- Chemical stability
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions
  No dangerous reactions known.
- Conditions to avoid
  No further relevant information available.
- Incompatible materials
  No further relevant information available.
- Hazardous decomposition products
  No dangerous decomposition products known.

11 Toxicological Information

- Information on toxicological effects
  - Acute toxicity
  - Primary irritant effect:
    - Skin corrosion/irritation
      Caustic effect on skin and mucous membranes.
    - Irritant to skin and mucous membranes.
  - Serious eye damage/irritation
    Strong irritant with the danger of severe eye injury.
  - Respiratory or skin 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

12 Ecological Information

- Toxicity
- Aquatic toxicity
  No further relevant information available.
- Persistence and degradability
  No further relevant information available.
- Behaviour in environmental systems:
  - Bioaccumulative potential
    No further relevant information available.
  - 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 or large quantities of it to reach ground water, water course or sewage system.
    Must not reach sewage water or drainage ditch undiluted or unneutralised.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - Other adverse effects
    No further relevant information available.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation**: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging**:
  - **Recommendation**: Disposal must be made according to official regulations.
  - **Recommended cleansing agents**: Water, if necessary together with cleansing agents.

14 Transport information

- **UN-Number**
  - ADG, IMDG, IATA: UN3264

- **UN proper shipping name**
  - ADG: 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, NITRIC ACID SOLUTION)
  - IMDG, IATA: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, NITRIC ACID SOLUTION)

- **Transport hazard class(es)**
  - ADG, IMDG, IATA: Class 8 Corrosive substances.

- **Packing group**
  - ADG, IMDG, IATA: II

- **Environmental hazards**:
  - Not applicable.

- **Special precautions for user**
  - **Warning**: Corrosive substances.
  - **Danger code (Kemler)**: 80
  - **EMS Number**: F-A.S-B
  - **Segregation groups**: Acids
  - **Stowage Category**: B
  - **Stowage Code**: SW2 Clear of living quarters.

- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  - Not applicable.

- **Transport/Additional information**:

  - **ADG**
    - **Limited quantities (LQ)**: 1L
      - **Code**: E2
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 500 ml
    - **Transport category**: 2
    - **Tunnel restriction code**: E

  - **IMDG**
    - **Limited quantities (LQ)**: 1L
      - **Code**: E2
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 500 ml

- **UN "Model Regulation"**
  - UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, NITRIC ACID SOLUTION), 8, II

(Contd. on page 7)
## 15 Regulatory information

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

### Australian Inventory of Chemical Substances

<table>
<thead>
<tr>
<th>Product ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7647-01-0</td>
<td>hydrochloric acid</td>
</tr>
<tr>
<td>7697-37-2</td>
<td>nitric acid</td>
</tr>
<tr>
<td>13494-80-9</td>
<td>tellurium</td>
</tr>
<tr>
<td>7440-05-3</td>
<td>palladium</td>
</tr>
<tr>
<td>7440-06-4</td>
<td>platinum</td>
</tr>
<tr>
<td>7440-31-5</td>
<td>tin</td>
</tr>
<tr>
<td>7440-36-0</td>
<td>antimony</td>
</tr>
<tr>
<td>7440-57-5</td>
<td>gold</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>water, distilled, conductivity or of similar purity</td>
</tr>
</tbody>
</table>

### Standard for the Uniform Scheduling of Medicines and Poisons

<table>
<thead>
<tr>
<th>Product ID</th>
<th>Description</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>7647-01-0</td>
<td>hydrochloric acid</td>
<td>S5, S6</td>
</tr>
<tr>
<td>7697-37-2</td>
<td>nitric acid</td>
<td>S5, S6</td>
</tr>
<tr>
<td>7440-36-0</td>
<td>antimony</td>
<td>S4</td>
</tr>
</tbody>
</table>

### GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

### Hazard pictograms

- GHS05
- GHS07

### Hazard-determining components of labelling:

- hydrochloric acid
- nitric acid

### Hazard statements

- **H314** Causes severe skin burns and eye damage.
- **H335** May cause respiratory irritation.

### Precautionary statements

- **If medical advice is needed, have product container or label at hand.**
- **Keep out of reach of children.**
- **Read label before use.**
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **Specific treatment (see on this label).**
- **Store locked up.**
- **Dispose of contents/container in accordance with local/regional/national/international regulations.**

### Directive 2012/18/EU

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

### Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## 16 Other information

**Disclaimer:** 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**
  - H252 Self-heating in large quantities; may catch fire.
  - H272 May intensify fire; oxidiser.
  - H301 Toxic if swallowed.
  - H302 Harmful if swallowed.
  - H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

- **Department issuing SDS:** product safety department
- **Contact:**
  Agilent Technologies Australia Pty Ltd
  1800 802 402
- **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
  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)
  VOC: Volatile Organic Compounds (USA, EU)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Ox. Liq. 2: Oxidizing liquids – Category 2
  Acute Tox. 4: Acute toxicity – Category 4
  Skin Corr. 1: Skin corrosion/irritation – Category 1
  Eye Dam. 1: Serious eye damage/eye irritation – Category 1
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3