

**Safety Data Sheet**  
according to WHS Regulations

Printing date 11.09.2018

Revision: 11.09.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

**1 Identification**

- English additional compounds
- 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  
Muggrave  
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 Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2A H319 Causes serious eye irritation.  
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



GHS07

- Signal word Warning
- Hazard statements  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
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.  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
Wear protective gloves / eye protection / face protection.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Take off contaminated clothing and wash before reuse.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.
- Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.

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· **vPvB:** Not applicable.

### 3 Composition and Information on Ingredients

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

**Dangerous components:**

7647-01-0	hydrochloric acid	⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; STOT SE 3, H335	10.0%
7697-37-2	nitric acid	⚠ Ox. Liq. 2, H272; ⚠ Skin Corr. 1A, H314	1.0%

**CHEMICAL IDENTIFICATION OF THE SUBSTANCE/PREPARATION**

13494-80-9	tellurium	⚠ Acute Tox. 3, H301; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H335	0.001%
7439-88-5	Iridium from Iridium(III) chloride hydrate	⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H335	0.001%
7440-05-3	palladium	⚠ Self-heat. 2, H252; ⚠ Ox. Sol. 2, H272	0.001%
7440-06-4	platinum	⚠ Ox. Sol. 2, H272	0.001%
7440-16-6	rhodium	⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	0.001%
7440-18-8	Ruthenium from Ruthenium (III) chloride trihydrate	⚠ Skin Corr. 1B, H314; ⚠ Eye Dam. 1, H318	0.001%
7440-31-5	tin		0.001%
7440-36-0	antimony		0.001%
7440-57-5	Gold		0.001%
7440-58-6	Hafnium from Hafnium(IV) oxychloride hydrate	⚠ Acute Tox. 3, H301; ⚠ Acute Tox. 3, H311; ⚠ Skin Corr. 1B, H314; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H332	0.001%
7732-18-5	water, distilled, conductivity or of similar purity		88.99%

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

### 4 First Aid Measures

- **Description of first aid measures**
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not give anything to eat or drink - Do not induce vomiting
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** 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.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
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:**
- **Precautions for safe 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:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls and personal protection

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

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

7647-01-0 hydrochloric acid

WES Peak limitation: 7.5 mg/m<sup>3</sup>, 5 ppm

7697-37-2 nitric acid

WES Short-term value: 10 mg/m<sup>3</sup>, 4 ppm  
Long-term value: 5.2 mg/m<sup>3</sup>, 2 ppm

· **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 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:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
Nitrile Glove  
Thickness: ≥0.11 mm  
Breakthrough time: > 480 minutes

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- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

## 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Colour:</b>	Colourless
· <b>Odour:</b>	Odourless
· <b>Odour threshold:</b>	Not applicable.

· **pH-value:** <1

· **Change in condition**

· <b>Melting point/freezing point:</b>	0°C (32°F)
· <b>Initial boiling point and boiling range:</b>	100°C (212°F)

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Not applicable.

· **Decomposition temperature:** Not applicable.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

· <b>Lower:</b>	Not applicable.
· <b>Upper:</b>	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:**

Miscible

· **Partition coefficient: n-octanol/water:** Not applicable.

· **Viscosity:**

· <b>Dynamic:</b>	Not applicable.
· <b>Kinematic:</b>	Not applicable.

· **Solvent content:**

· <b>Water:</b>	89.0 %
· <b>VOC (EC)</b>	0.00 %

· **Solids content:** 0.0 %

· **Other information** No further relevant information available.

## 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.

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- **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** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Irritating effect.
- **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.
- **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.

## 14 Transport information

- |                                  |  |
|----------------------------------|--|
| · <b>UN-Number</b>               |  |
| · <b>ADG, IMDG, IATA</b>         | UN3264   |
| · <b>UN proper shipping name</b> |  |
| · <b>ADG</b>                     | 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, NITRIC ACID SOLUTION) |
| · <b>IMDG, IATA</b>              | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, NITRIC ACID SOLUTION)      |

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



- **Class** 8 Corrosive substances.
- **Label** 8

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

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

- **IMDG** 1L
- **Limited quantities (LQ)** Code: E2
- **Excepted quantities (EQ)** 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

### 15 Regulatory information

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

- **Australian Inventory of Chemical Substances**

7647-01-0	hydrochloric acid
7697-37-2	nitric acid
13494-80-9	tellurium
7440-05-3	palladium
7440-06-4	platinum
7440-31-5	tin
7440-36-0	antimony
7440-57-5	Gold
7732-18-5	water, distilled, conductivity or of similar purity

- **Standard for the Uniform Scheduling of Medicines and Poisons**

7647-01-0	hydrochloric acid	S5, S6
7697-37-2	nitric acid	S5, S6
7440-36-0	antimony	S4

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- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard statements**
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - 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.
  - Avoid breathing dust/fume/gas/mist/vapours/spray.
  - Wear protective gloves / eye protection / face protection.
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Take off contaminated clothing and wash before reuse.
  - 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. 1A: Skin corrosion/irritation – Category 1A
  - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3